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## NOTICE OF ALLOWANCE AND FEE(S) DUE

513 7590 03/24/2010

WENDEROTH, LIND & PONACK, L.L.P.  
1030 15th Street, N.W.,  
Suite 400 East  
Washington, DC 20005-1503

EXAMINER

MARKS, JACOB B

ART UNIT

PAPER NUMBER

1795

DATE MAILED: 03/24/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,940

07/13/2006

Takashi Yamada

2006\_1116A

9296

TITLE OF INVENTION: SEPARATOR FOR FUEL CELL, METHOD FOR PRODUCING SEPARATOR, AND SOLID OXIDE FUEL CELL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/24/2010

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

513 7590 03/24/2010

**WENDEROTH, LIND & PONACK, L.L.P.**  
1030 15th Street, N.W.,  
Suite 400 East  
Washington, DC 20005-1503

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,940 07/13/2006 Takashi Yamada 2006\_1116A 9296

TITLE OF INVENTION: SEPARATOR FOR FUEL CELL, METHOD FOR PRODUCING SEPARATOR, AND SOLID OXIDE FUEL CELL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$300 \$0 \$1810 06/24/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
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MARKS, JACOB B 1795 429-465000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

MARKS, JACOB B

ART UNIT

PAPER NUMBER

1795

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 521 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 521 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/585,940	YAMADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JACOB MARKS	1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment received on 12-18-2009.
2. ☐ The allowed claim(s) is/are \_\_\_\_\_.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <p>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</p> <p>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</p> | <p>5. <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</p> <p>7. <input type="checkbox"/> Examiner's Amendment/Comment</p> <p>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</p> <p>9. <input type="checkbox"/> Other _____.</p> |
|---|---|

/Jacob Marks/

### **DETAILED ACTION**

1. Applicant's amendment dated 12-18-2009 was received. Claims 9-11 were amended. Claims 1-8 and 12-22 were cancelled. Claims 9-11 are pending.
2. The text of those sections of Title 35, U.S. code not included in this action can be found in the prior Office Action issued 07-20-2009.

### ***Claim Objections***

3. The claim objection under 37 CFR 1.75(c) as being of improper dependent form on claim 15 is withdrawn because the claim has been cancelled.

### ***Claim Rejections - 35 USC § 102***

4. The claim rejections under 35 U.S.C. 102(b) as being anticipated by Komada et al. (WO 03-075384, for English equivalent see US Pat. Pub. 2005/0221161) on claims 1-3, 5, 7, and 16 are withdrawn because the claims have been cancelled.

### ***Claim Rejections - 35 USC § 103***

5. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Komada et al. in view of Tsunoda (US Pat. Pub. 2004/0043270) on claims 4 and 6 are withdrawn because the claims have been cancelled.

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6. The claim rejection under 35 U.S.C. 103(a) as being unpatentable over Komada et al. in view of Mottola et al. (US Pat. No. 6,179,816) on claim 8 are withdrawn because the claim was cancelled.

7. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Komada et al. in view of Allen (US Pat. No. 6,670,069) on claims 12 and 13 are withdrawn because the claims have been cancelled.

8. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Komada et al. in view of Nakata et al. (US Pat. Pub. 2001/0028974) on claim 14 are withdrawn because the claim has been cancelled.

9. The claim rejection under 35 U.S.C. 103(a) as being unpatentable over Komada et al. in view of Nakata et al. and Allen on claim 15 is withdrawn because the claim has been cancelled.

***Allowable Subject Matter***

10. Claims 9-11 are allowed. The reasons for allowance are as follows:

Regarding claim 9, Komada et al. teach a solid oxide fuel cell stack 1 with current collectors 6 and 7, an air electrode layer 4 (power generation cell), and separators 8 that are arranged in alternate lamination (see fig. 1) comprising gas discharge openings 24 (ports for discharging reactive gas) on electrode layers (abstract, par. 68). Komada et al. further disclose that there are multiple gas discharge openings 24 (ports) wherein gas is supplied to whole areas of electrode layers (abstract). The gas discharge openings 24 (ports) would inherently discharge like a shower toward the current collectors 6 and 7 and the air electrode layer 4 (power generation cell) (abstract, par.

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60). Komada et al. disclose that separator 8 is hollow in order to function as the gas flow path where the gas is discharged from the gas discharge openings 24 (ports) (fig. 2b, par. 65). Such a hollow gas flow path would act as an inner flow passage for guiding reactive gas to the gas discharge ports. Komada et al. neither teach nor fairly suggest that the inner flow passage has a spiral shape.

Regarding claim 10, Komada et al. teach a solid oxide fuel cell stack 1 with current collectors 6 and 7, an air electrode layer 4 (power generation cell), and separators 8 that are arranged in alternate lamination (see fig. 1) comprising gas discharge openings 24 (ports for discharging reactive gas) on electrode layers (abstract, par. 68). Komada et al. further disclose that there are multiple gas discharge openings 24 (ports) wherein gas is supplied to whole areas of electrode layers (abstract). The gas discharge openings 24 (ports) would inherently discharge like a shower toward the current collectors 6 and 7 and the air electrode layer 4 (power generation cell) (abstract, par. 60). Komada et al. disclose that separator 8 is hollow in order to function as the gas flow path where the gas is discharged from the gas discharge openings 24 (ports) (fig. 2b, par. 65). Such a hollow gas flow path would act as an inner flow passage for guiding reactive gas to the gas discharge ports. Komada et al. neither teach nor fairly suggest that the inner flow passage has a zigzagged shape.

Regarding claim 11, Komada et al. teach a solid oxide fuel cell stack 1 with current collectors 6 and 7, an air electrode layer 4 (power generation cell), and separators 8 that are arranged in alternate lamination (see fig. 1) comprising gas discharge openings 24 (ports for discharging reactive gas) on electrode layers (abstract,

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par. 68). Komada et al. further disclose that there are multiple gas discharge openings 24 (ports) wherein gas is supplied to whole areas of electrode layers (abstract). The gas discharge openings 24 (ports) would inherently discharge like a shower toward the current collectors 6 and 7 and the air electrode layer 4 (power generation cell) (abstract, par. 60). Komada et al. disclose that separator 8 is hollow in order to function as the gas flow path where the gas is discharged from the gas discharge openings 24 (ports) (fig. 2b, par. 65). Such a hollow gas flow path would act as an inner flow passage for guiding reactive gas to the gas discharge ports. Komada et al. teach nor fairly suggest that the inner flow passage is formed by multiple flow passage radially branched from the gas inlet, which is in the outer peripheral part of the separator.

11. In addition, the following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Regarding claim 9, Akikusa et al. (US Pat. Pub. 2003/0134174) teach a separator for a fuel cell which is arranged in alternate lamination with fuel cell, the separator comprising: a gas discharge port 23b for discharging reactive gas, on layer surface thereof; and an inner flow passage for guiding the reactive gas, wherein the reactive gas is made to be discharged like a shower form the gas discharge port toward the fuel cell, wherein the inner flow passage is a spiral flow passage (fig. 4, par. 154, 155). Akikusa et al. does not teach that multiple gas discharge ports are provided on approximately a whole area of the layer surface and that the starting point of the flow passage is in the outer peripheral part of the separator.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB MARKS whose telephone number is (571)270-7873. The examiner can normally be reached on Monday through Friday 7:30-5:00 alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacob Marks/

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 1795